

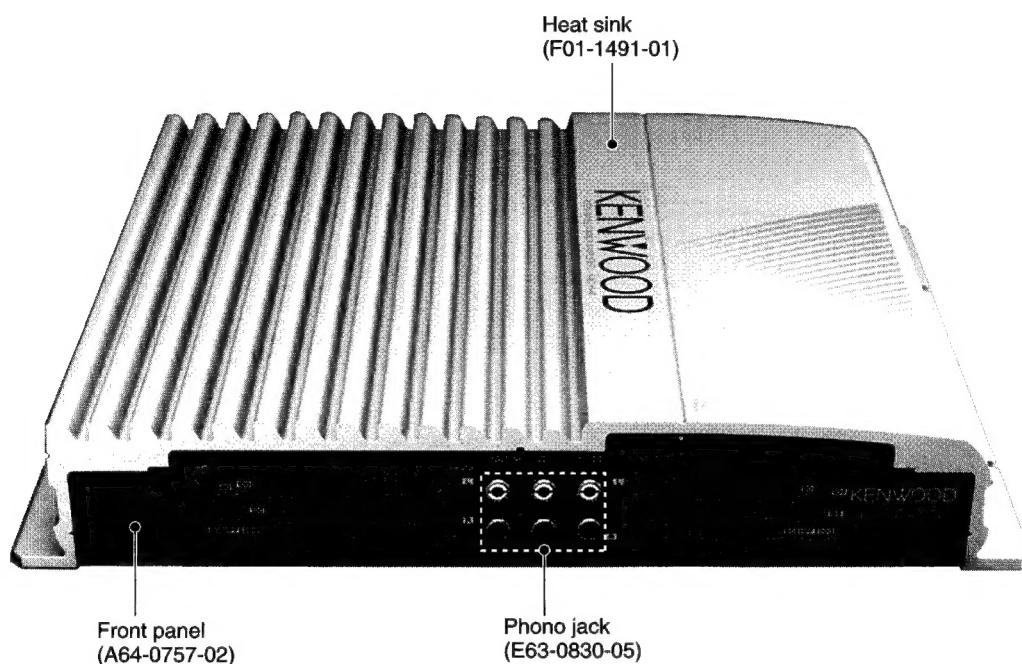
POWER AMPLIFIER

KAC-846

SERVICE MANUAL

KENWOOD

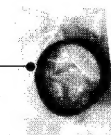
© 1996-5 PRINTED IN KOREA
B51-7019-00 (K) 3608



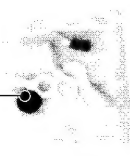
Screw set
(N99-1587-05)



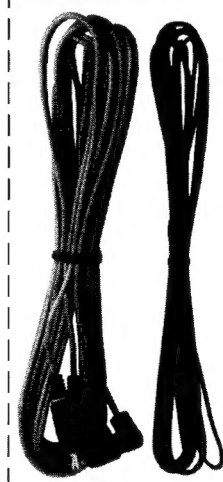
Rubber tube assy
(W01-0747-05)



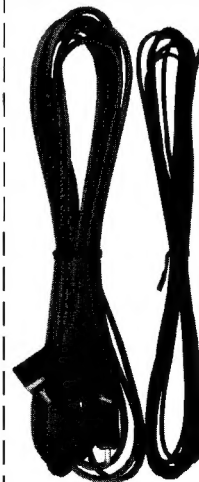
Terminal set
(W01-0746-05)



DC cord assy
(E30-4323-05)



Audio cord assy
(E30-4067-05)



Audio cord assy
(E30-4067-05)

E and M type only

M type only

CONTENTS / CONNECTION

CONTENTS

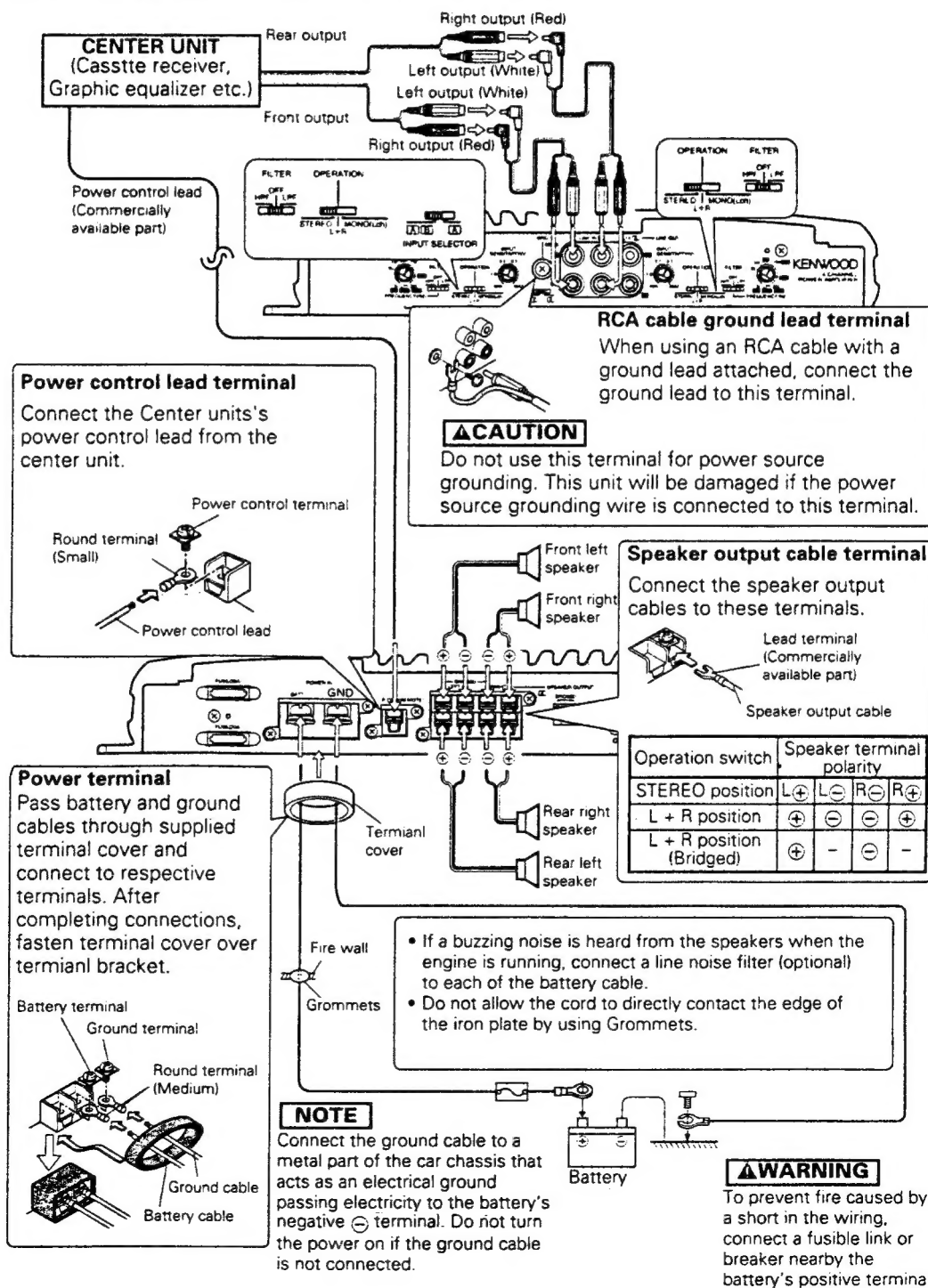
| | |
|--------------------------------|---|
| CONNECTION | 2 |
| BLOCK DIAGRAM | 3 |
| COMPONENTS DESCRIPTION | |
| PREAMPLIFIER UNIT (X08-) | 4 |
| AUDIO UNIT (X09-) | 4 |
| ADJUSTMENT/EINSTELLUNGEN | 5 |

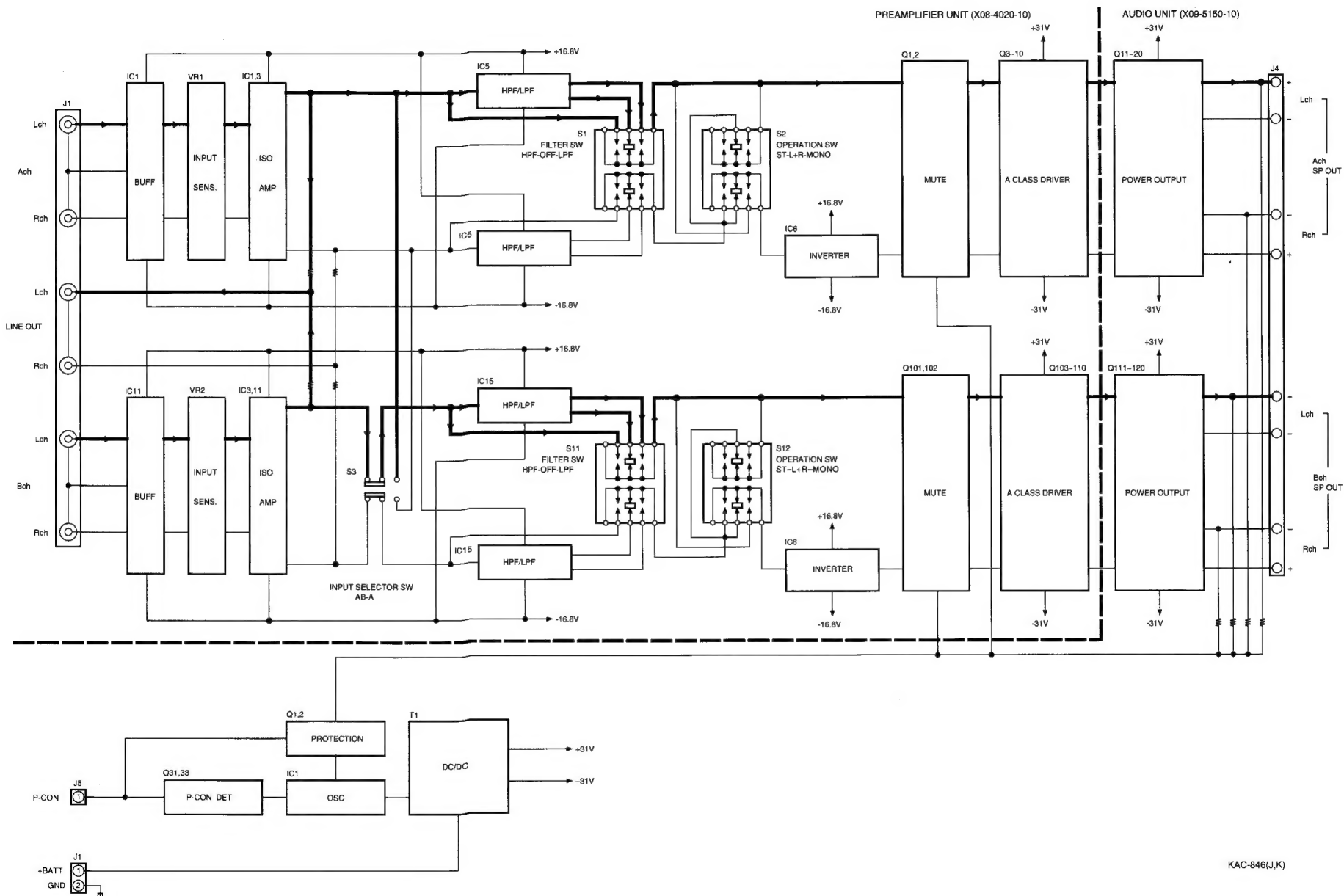
| | |
|-------------------------|------------|
| PC BOARD | 7 |
| SCHEMATIC DIAGRAM | 11 |
| EXPLODED VIEW | 15 |
| PARTS LIST | 16 |
| SPECIFICATIONS | Back cover |

CONNECTION

Connection (KAC-846)

■ Full-range 4-channel system





BLOCK DIAGRAM

KAC-846

KAC-846(J,K)

COMPONENTS DESCRIPTION

PREAMPLIFIER UNIT (X08-4020-10)

| Ref. No. | Use and Function | Operation and Condition |
|-----------------|----------------------------|-------------------------|
| IC1,11 | INPUT BUFFER | IC1,11(1/4, 2/4) |
| IC1,3,11 | ISOLATION AMP | IC1,11(3/4, 4/4) |
| IC5,15 | LPF | IC5,15(1/4, 4/4) |
| IC5,15 | HPF | IC5,15(2/4, 3/4) |
| IC6 | INVERTER CIRCUIT | |
| Q1,2,101,102 | MUTE | |
| Q3 ~Q6,103 ~106 | INPUT DIFFERENTIAL AMP | |
| Q7 ~10,107 ~110 | 2ND STAGE DIFFERENTIAL AMP | |

AUDIO UNIT (X09-5150-10)

| Ref. No. | Use and Function | Operation and Control |
|----------------|--------------------------|-------------------------------------------------------|
| IC1 | SWITCHING REGULATOR | Oscillator for DC/DC converter. |
| Q1,2 | DC PROTECTION | |
| Q11,12,111,112 | TEMPERATURE COMPENSATION | |
| Q23,24 | SWITCHING DRIVE | |
| Q25,26 | SWITCHING DRIVE | |
| Q27 ~30 | SWITCHING POWER STAGE | |
| Q13,14,113,114 | POWER AMP DRIVE STAGE | |
| Q15,16,115,116 | POWER AMP DRIVE STAGE | |
| Q17,18,117,118 | POWER STAGE | |
| Q19,20,119,120 | POWER STAGE | |
| Q21,22,121,122 | OVER-CURRENT PROTECTION | Turns IC1 OFF in case of over current. |
| Q3 | MUTE DRIVE | |
| Q4 | OVER-VOLTAGE PROTECTION | Turns Q31 OFF when the supply voltage is 18V or more. |
| Q31 | P-CON DETECT | |
| Q32 | POWER SW | Turns the power to IC1 ON/OFF. |
| Q33 | P-CON DETECT | |
| Q7,107 | SUB-MUTE | Activated only when power supply varies. |
| Q35,36 | MAIN AMP POWER SW | |

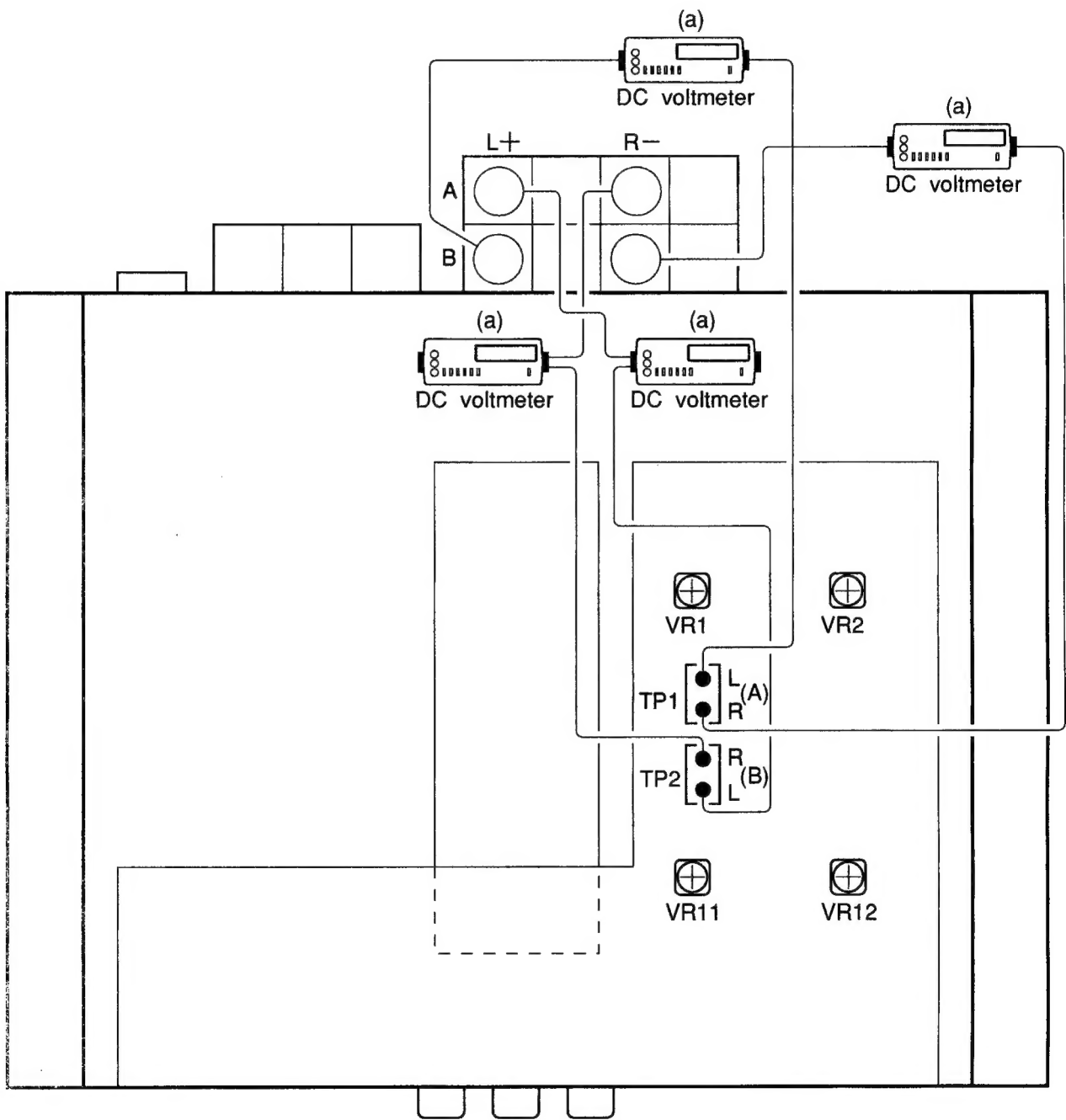
ADJUSTMENT

| No. | Item | Input Setting | Output Setting | Amp Setting | Adjustment Point | Adjustment Method | Fig. |
|-------------------------------------|--------------|---------------|-----------------------------------------------------------|-------------|------------------------------------------------------------------|-------------------|------|
| Connect the cassette receiver, etc. | | | | | | | |
| 1 | Idle current | — | Connect a DC voltmeter between TP1/TP2 and SP- OUT L+/R-. | VOLUME : 0 | (A) VR1 (Lch) VR2 (Rch) (B) VR11 (Lch) VR12 (Rch) | 25mV | (a) |

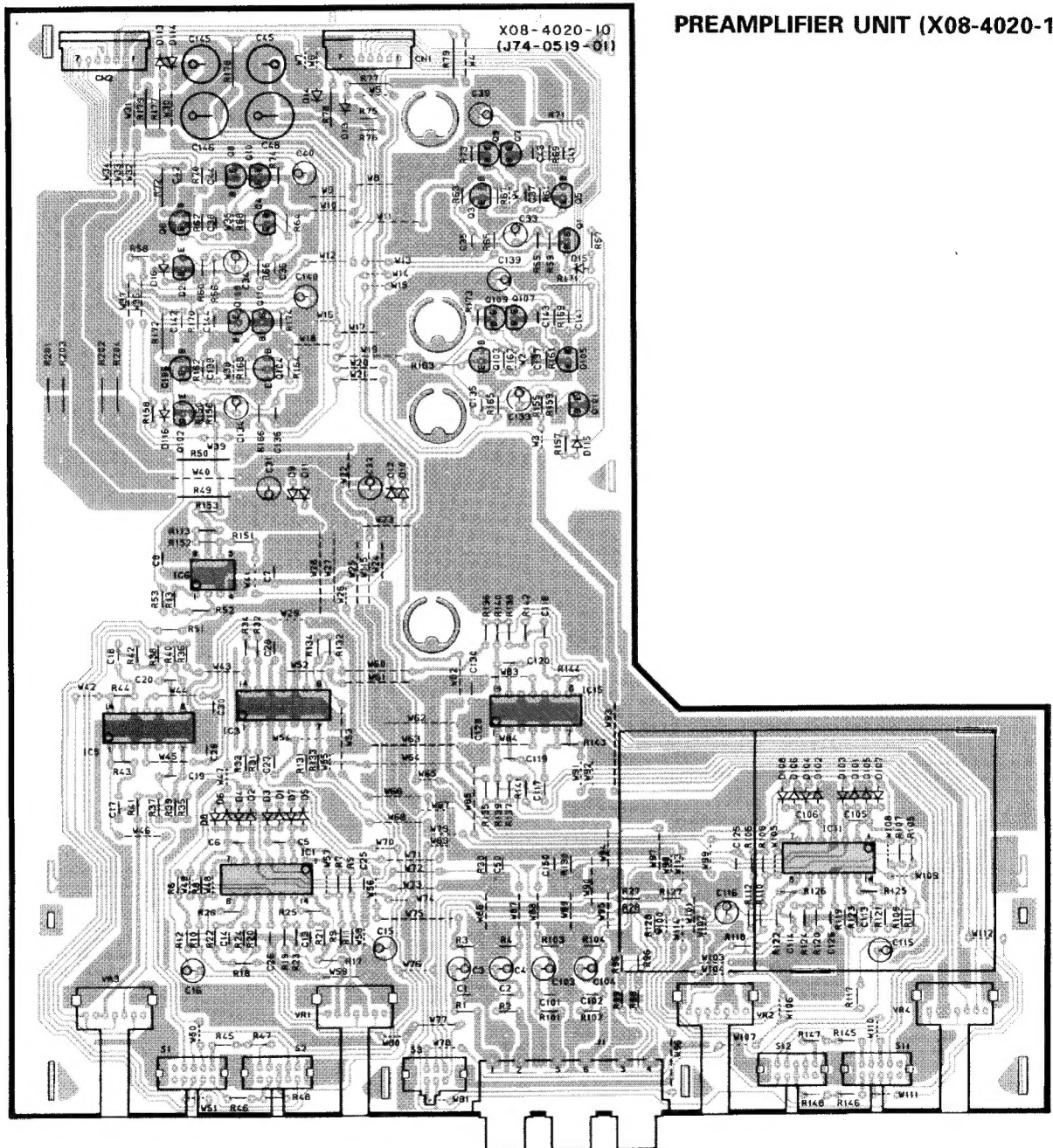
EINSTELLUNGEN

| Nr. | Gegenstand | Eingangseinstellung | Ausgangseinstellung | Verstärkereinstellung | Einstellpunkt | Einstellmethode | Abb. |
|------------------------------------------------------|--------------|---------------------|----------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------|-----------------|------|
| Das Kassettengerät, den Empfänger usw. anschliessen. | | | | | | | |
| 1 | Idle current | — | Ein Gleichstrom-Voltmeter zwischen TP1/ TP2 und SP-OUT L+/R- anschliessen. | VOLUM : 0 | (A) VR1 (Lch) VR2 (Rch) (B) VR11 (Lch) VR12 (Rch) | 25mV | (a) |

ADJUSTMENT

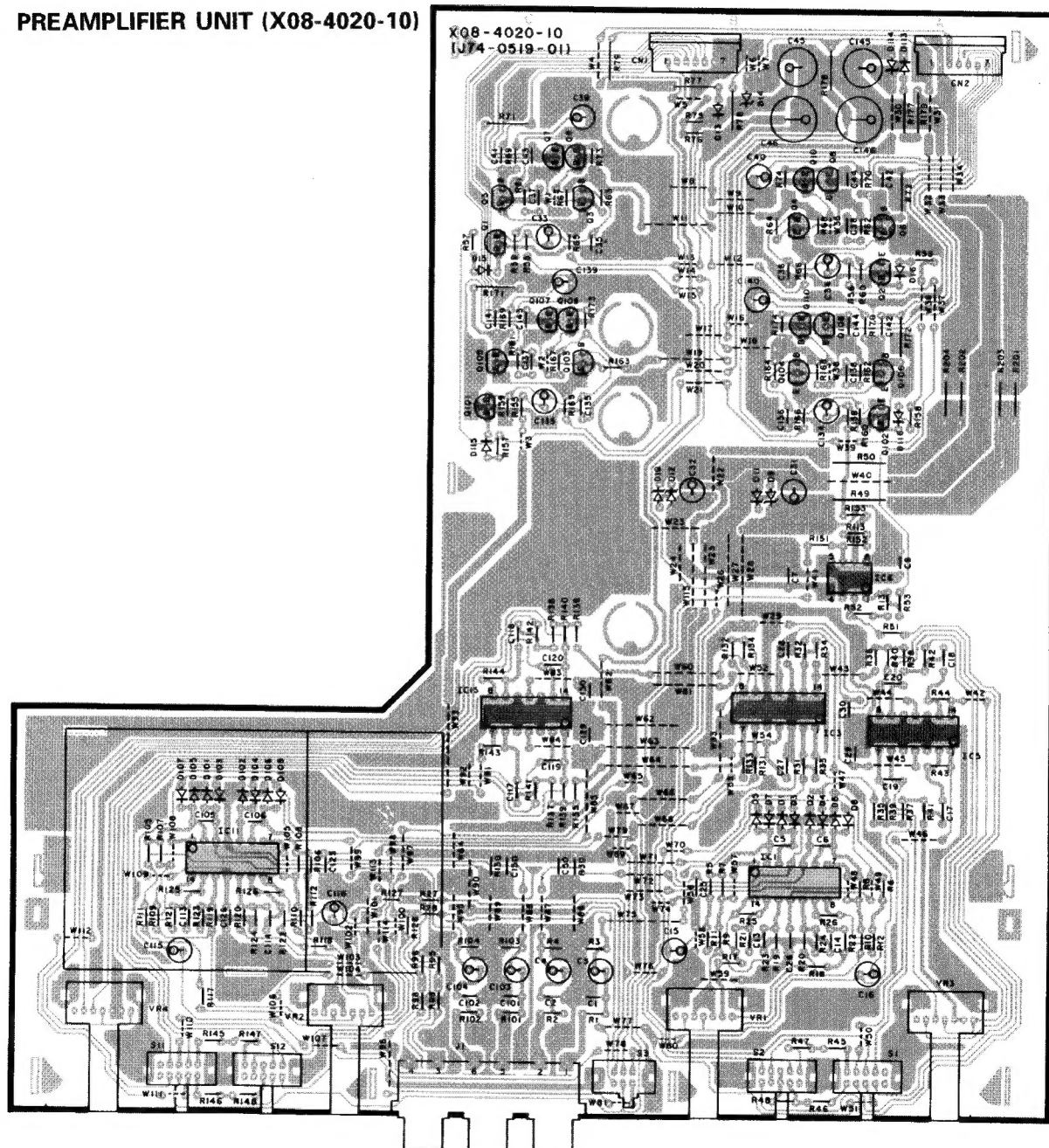


PC BOARD (Component side view)



PC BOARD (Foil side view)

PREAMPLIFIER UNIT (X08-4020-10)



PC BOARD (Component side view)

AUDIO UNIT (X09-5150-10)

X09-5150-10
(J74-0520-01)

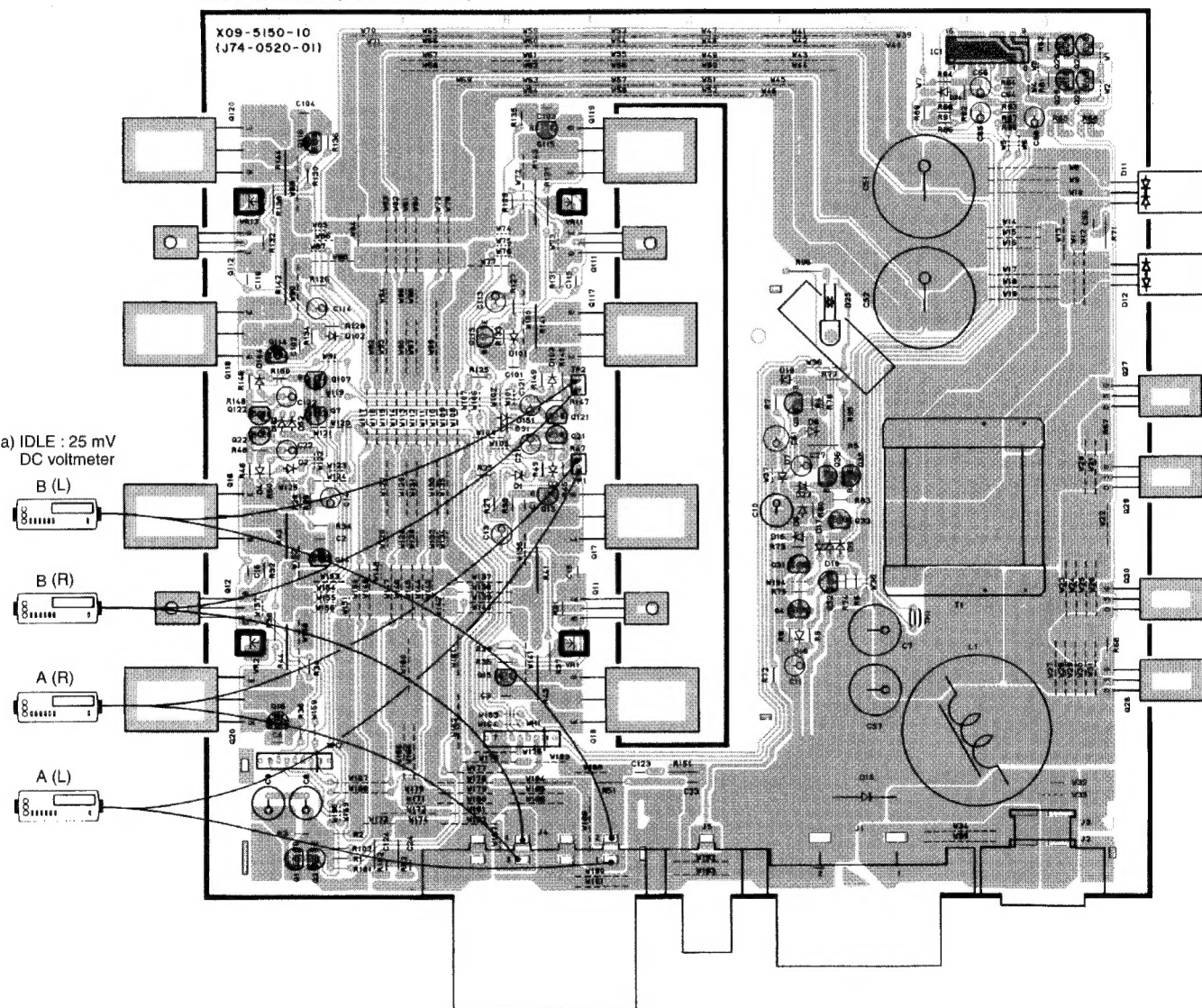
(a) IDLE : 25 mV
DC voltmeter

B (L)

B (R)

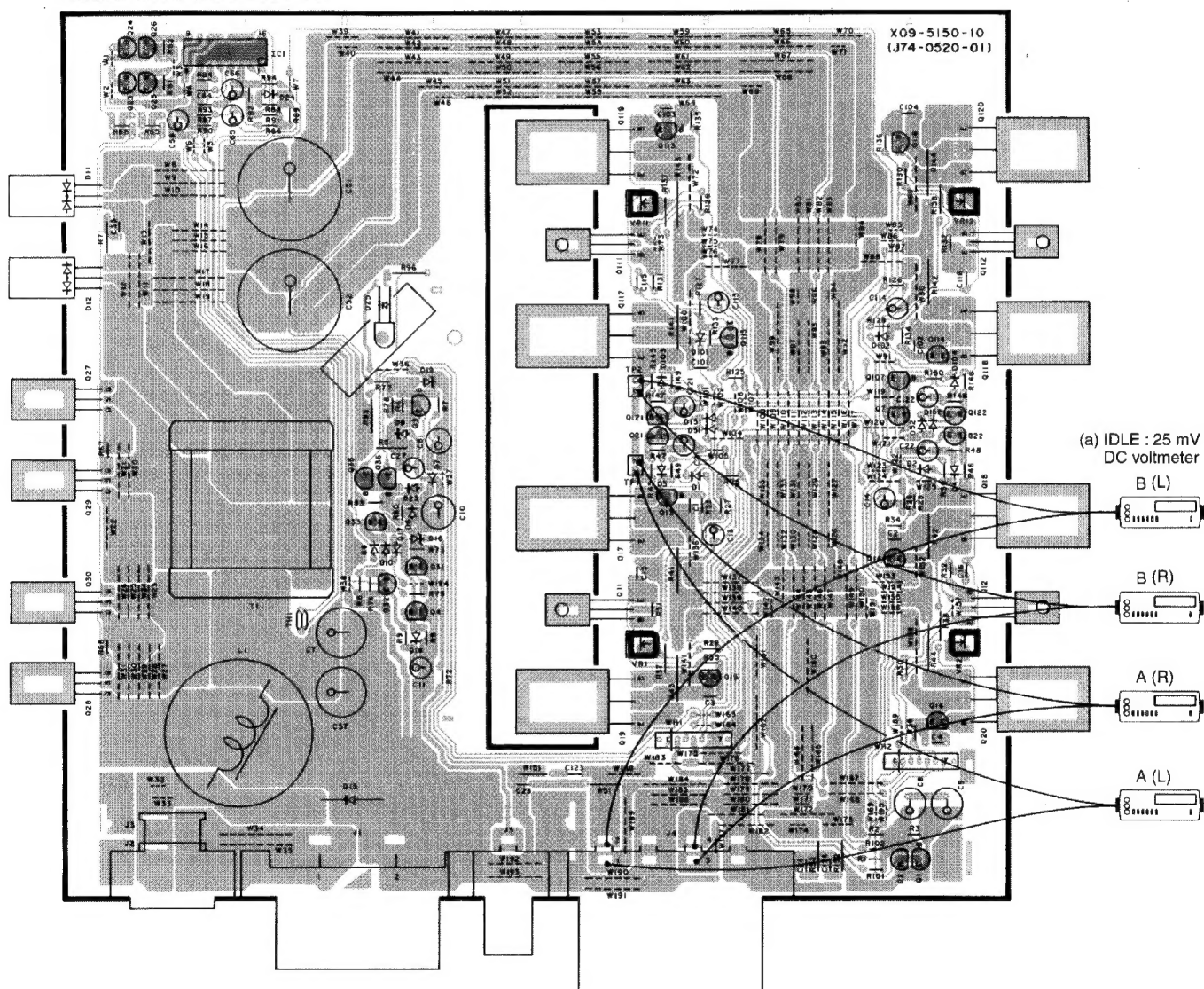
A (R)

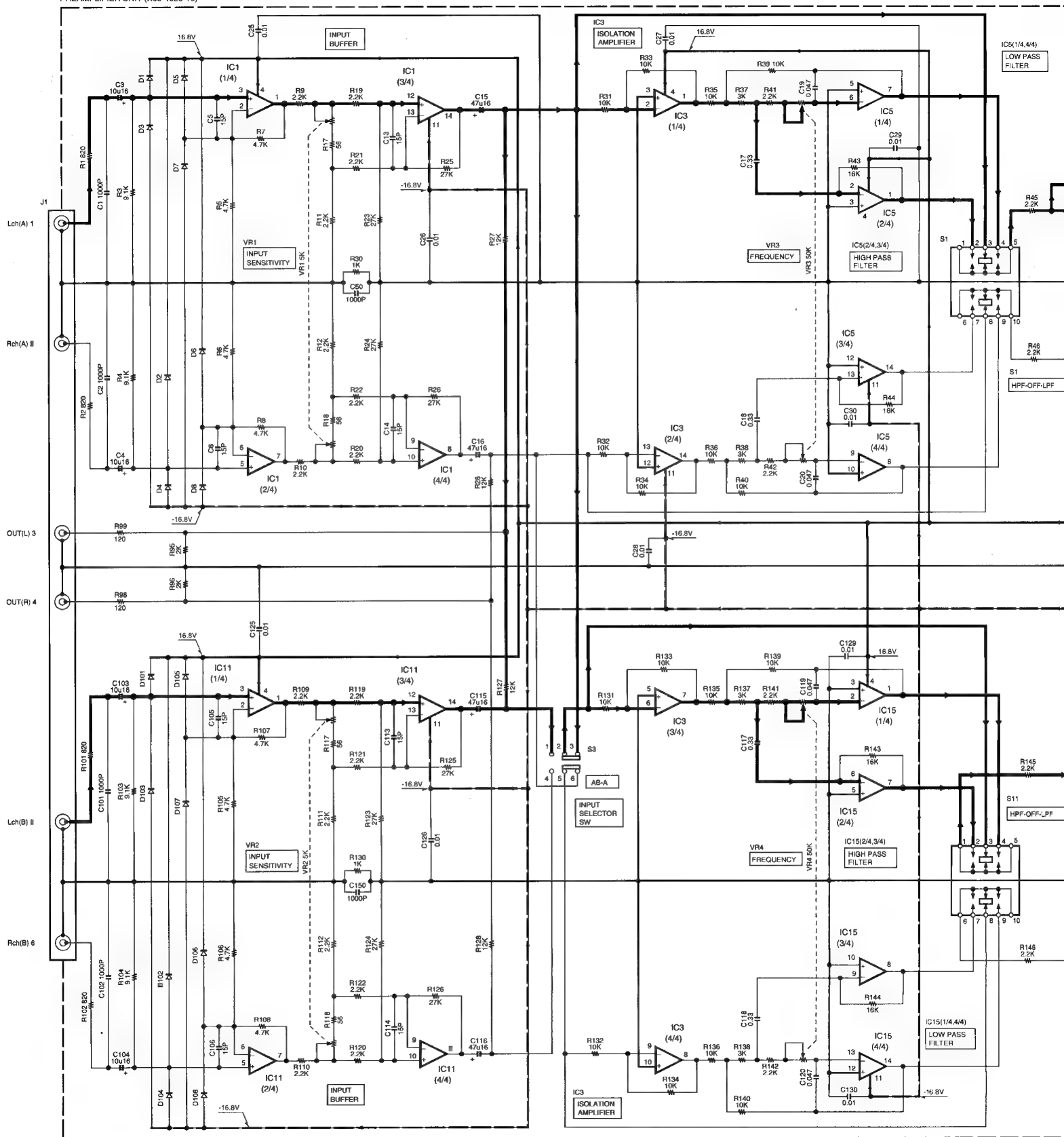
A (L)



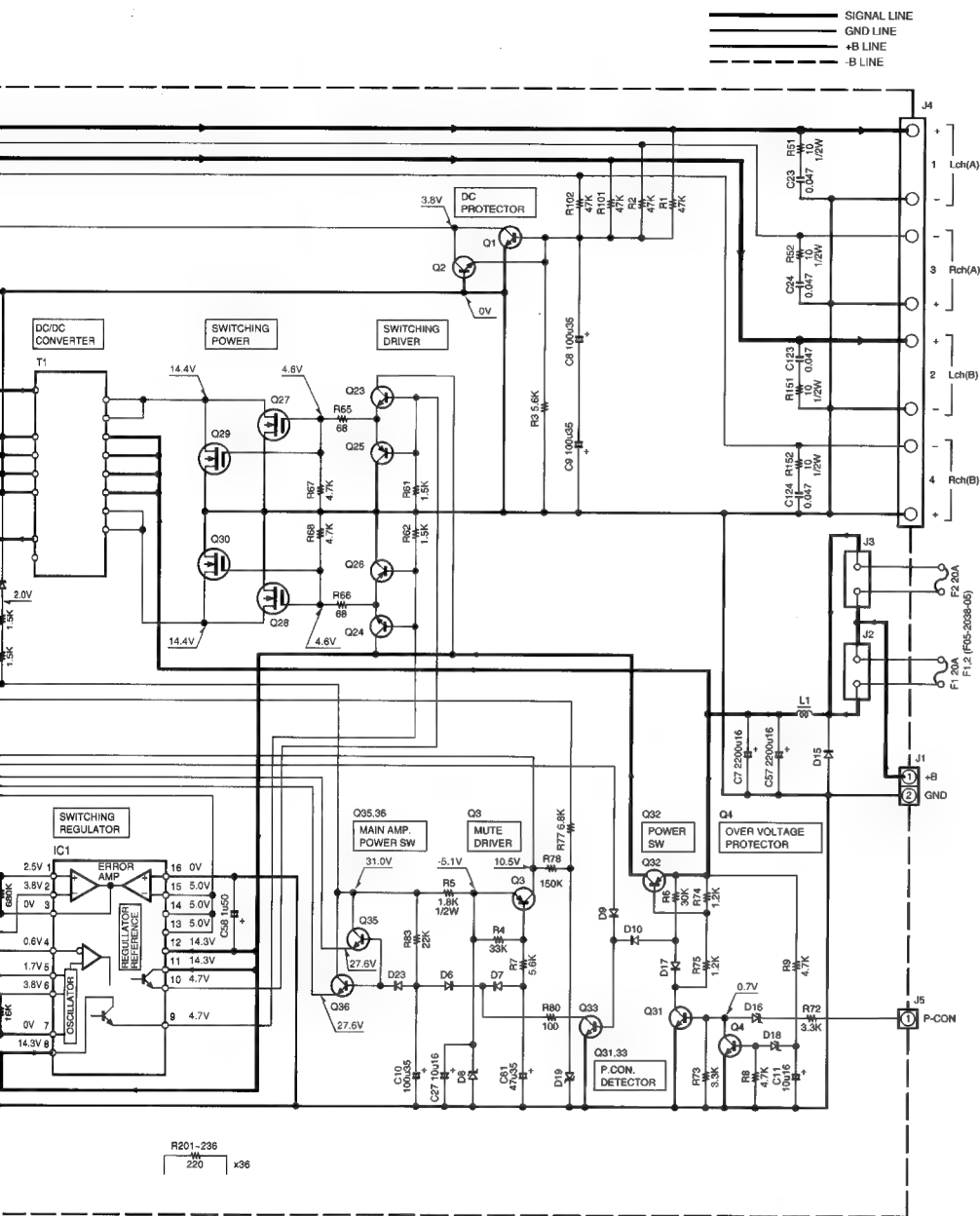
(Foil side view)

AUDIO UNIT (X09-5150-10)





CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



| | | | |
|----------------------------|---------------|----------------------------|------------------|
| IC1 | : UPC484C | Q1,2,4,21-24,31,33,121,122 | : 2SC945(A)(Q,P) |
| D1-4,6,7,9,10,17,23,51,52, | | Q3,25,26,32 | : 2SA733(A)(Q,P) |
| 101-104,151,152 | : 1SS176 | Q7,107 | : 2SC1845(F,E) |
| D8 | : RD10JS(B) | Q11,12,111,112 | : 2SC2590(Q,R) |
| D11 | : D10LC20UWA | Q13,14,113,114 | : 2SC1627A |
| D12 | : D10LC20UWA | Q15,16,115,116 | : 2SA817A |
| D15 | : RM4ZLF-J1 | Q17,18,117,118 | : 2SC5100LB |
| D16 | : RD7.5JS(B) | Q19,20,119,120 | : 2SA1908LB |
| D18 | : RD20JS(B) | Q27-30 | : MTAJ30N06ELFK |
| D19 | : RD5.1JS(B) | Q35,36 | : 2SC3940A(R,S) |
| D25 | : B30-1460-05 | | |

KAC-846(J,K)

Recommended parts
 Wire, replace only
 The measurements
 The measurement value may vary depending on the
 measuring instruments used or on the product.



PARTS LIST

*New Parts

Parts without Part No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

| Ref.No. | A d d | N e w | Prts No. | Description | Dest inati on |
|----------------------------------------|-------------|-------------|---------------|-----------------------------------|---------------------|
| KAC-846 | | | | | |
| 2 | 2A | * | A64-0757-02 | FRONT PANEL | |
| 3 | 2B | * | A84-0094-02 | REAR PANEL | |
| 4 | 3B | * | B19-1060-03 | LIGHTING BOARD | |
| - | | | B46-0100-40 | WARRANTY CARD | |
| - | | | B64-0771-00 | INST. MANUAL (ENG., FRE., SPA.) | K |
| - | | * | B64-0772-00 | INST. MANUAL (ENG. FRE, GER, DUT) | E |
| - | | * | B64-0772-00 | INST. MANUAL (ITA., SPA., POR.) | E |
| - | | | B64-0774-00 | INST. MANUAL (ENG., FRE., SPA.) | M |
| 6 | 1A | | E30-4067-05 | AUDIO CORD ASSY (Accessory) | M |
| DC1 | 1A | | E30-4323-05 | DC CORD ASSY (Accessory) (CC) | EM |
| 12 | 3B | * | F01-1491-01 | HEAT SINK (TOP COVER) | |
| F1 , 2 | 2B | | F05-2038-05 | FUSE (BLADE TYPE) (20A) | |
| 14 | 2A | * | H12-2602-03 | PACKING FIXTURE (x1) | |
| 15 | 2A | | H12-2606-04 | PACKING FIXTURE (x2) | |
| - | | | H25-0321-04 | PROTECTION BAG (600x315x0.03) | |
| - | | | H25-0336-04 | PROTECTION BAG (170x250x0.03) | |
| - | | * | H54-0587-03 | ITEM CARTON CASE | |
| - | | * | H64-0623-04 | OUTER CARTON CASE | |
| 21 | 1A | | N99-1587-05 | SCREW SET (Accessory) | |
| A | 3A | | N09-4026-05 | TAPPING SCREW (4x8, TP, S) | |
| B | 2B | | N09-4102-05 | SEMS (MACHINE SCREW) (2.6x10) | |
| C | 3A | | N15-1040-46 | FLAT WASHER | |
| D | 2B | | N83-3006-46 | PAN HEAD TAPTITE SCREW | |
| E | 2B | | N87-3012-46 | BRAZIER HEAD SCREW | |
| F | 1B | | N89-3006-45 | BINDING HEAD SCREW (Black) | |
| G | 2B | | N89-3006-46 | BINDING HEAD SCREW | |
| 22 | 1A | | W01-0746-05 | TERMINAL SET (Accessory) (CC) | EM |
| 23 | 1A | * | W01-0747-05 | RUBBER TUBE ASSY (Accessory) | |
| PREAMPLIFIER UNIT (X08-4020-10) | | | | | |
| C1 , 2 | | | CK45FB1H102K | CERAMIC 100PF | K |
| C3 , 4 | | | CE04DW1C100M | ELECTRO 10UF | 16WV |
| C5 , 6 | | | CC45FCH1H150J | CERAMIC 15PF | J |
| C7 , 8 | | | CK45FF1H103Z | CERAMIC 0.010UF | Z |
| C13 , 14 | | | CC45FCH1H150J | CERAMIC 15PF | J |
| C15 , 16 | | | CE04DW1C470M | ELECTRO 47UF | 16WV |
| C17 , 18 | | | CF92FV1H334J | MF-C 0.33UF | J |
| C19 , 20 | | | CF92FV1H473J | MF-C 0.047UF | J |
| C25 - 30 | | | CK45FF1H103Z | CERAMIC 0.010UF | Z |
| C31 , 32 | | | CE04DW1E220M | ELECTRO 22UF | 25WV |
| C33 , 34 | | | CE04DW1C100M | ELECTRO 10UF | 16WV |
| C35 , 36 | | | CK45FB1H471K | CERAMIC 470PF | K |
| C37 , 38 | | | CK45FB1H101K | CERAMIC 100PF | K |
| C39 , 40 | | | CE04DW0J101M | ELECTRO 100UF | 6.3WV |
| C41 , 42 | | | CC45FSL1H100D | CERAMIC 10PF | D |
| C43 , 44 | | | CK45FB1H101K | CERAMIC 100PF | K |
| C45 | | | CE04DW1C221M | ELECTRO 220UF | 16WV |
| C46 | | | CE04DW1V471M | ELECTRO 470UF | 35WV |
| C50 | | | CF92FV1H102J | MF-C 1000PF | J |
| C101, 102 | | | CK45FB1H102K | CERAMIC 1000PF | K |

| Ref.No. | A d d | N e w | Prts No. | Description | Dest inati on |
|-----------|-------------|-------------|---------------|--------------------------|---------------------|
| C103, 104 | | | CE04DW1C100M | ELECTRO 10UF | 16WV |
| C105, 106 | | | CC45FCH1H150J | CERAMIC 15PF | J |
| C113, 114 | | | CC45FCH1H150J | CERAMIC 15PF | J |
| C115, 116 | | | CE04DW1C470M | ELECTRO 47UF | 16WV |
| C117, 118 | | | CF92FV1H334J | MF-C 0.33UF | J |
| C119, 120 | | | CF92FV1H473J | MF-C 0.047UF | J |
| C125, 126 | | | CK45FF1H103Z | CERAMIC 0.010UF | Z |
| C129, 130 | | | CK45FF1H103Z | CERAMIC 0.010UF | Z |
| C133, 134 | | | CE04DW1C100M | ELECTRO 10UF | 16WV |
| C135, 136 | | | CK45FB1H471K | CERAMIC 470PF | K |
| C137, 138 | | | CK45FB1H101K | CERAMIC 100PF | K |
| C139, 140 | | | CE04DW0J101M | ELECTRO 100UF | 6.3WV |
| C141, 142 | | | CC45FSL1H100D | CERAMIC 10PF | D |
| C143, 144 | | | CK45FB1H101K | CERAMIC 100PF | K |
| C145 | | | CE04DW1C221M | ELECTRO 220UF | 16WV |
| C146 | | | CE04DW1V471M | ELECTRO 470UF | 35WV |
| C150 | | | CF92FV1H102J | MF-C 1000PF | J |
| CN1 , 2 | | | E40-9468-05 | FLAT CABLE CONNECTOR | |
| J1 | 2A | | E63-0830-05 | PHONO JACK (LINE IN/OUT) | |
| H | 3A | | N80-3010-45 | PAN HEAD SCREW (Black) | |
| R1 , 2 | | | RD14BB2C821J | RD 820 | J 1/6W |
| R3 , 4 | | | RD14BB2C912J | RD 9.1K | J 1/6W |
| R5 - 8 | | | RD14BB2C472J | RD 4.7K | J 1/6W |
| R9 - 13 | | | RD14BB2C222J | RD 2.2K | J 1/6W |
| R17 , 18 | | | RD14BB2C560J | RD 56 | J 1/6W |
| R19 - 22 | | | RD14BB2C222J | RD 2.2K | J 1/6W |
| R23 - 26 | | | RD14BB2C273J | RD 27K | J 1/6W |
| R27 , 28 | | | RD14BB2C123J | RD 12K | J 1/6W |
| R30 | | | RD14BB2C102J | RD 1.0K | J 1/6W |
| R31 - 36 | | | RD14BB2C103J | RD 10K | J 1/6W |
| R37 , 38 | | | RD14BB2C302J | RD 3.0K | J 1/6W |
| R39 , 40 | | | RD14BB2C103J | RD 10K | J 1/6W |
| R41 , 42 | | | RD14BB2C222J | RD 2.2K | J 1/6W |
| R43 , 44 | | | RD14BB2C163J | RD 16K | J 1/6W |
| R45 - 48 | | | RD14BB2C222J | RD 2.2K | J 1/6W |
| R49 , 50 | | | RS14KB3D151J | FL-PROOF RS 150 | J 2W |
| R51 , 52 | | | RD14BB2C473J | RD 47K | J 1/6W |
| R53 | | | RD14BB2C222J | RD 2.2K | J 1/6W |
| R55 , 56 | | | RD14BB2C472J | RD 4.7K | J 1/6W |
| R57 , 58 | | | RD14BB2C332J | RD 3.3K | J 1/6W |
| R59 , 60 | | | RD14BB2C183J | RD 18K | J 1/6W |
| R61 , 62 | | | RD14BB2C101J | RD 100 | J 1/6W |
| R63 , 64 | | | RD14BB2C821J | RD 820 | J 1/6W |
| R65 , 66 | | | RD14BB2C752J | RD 7.5K | J 1/6W |
| R67 , 68 | | | RD14BB2C821J | RD 820 | J 1/6W |
| R69 , 70 | | | RD14BB2C112J | RD 1.1K | J 1/6W |
| R71 , 72 | | | RD14BB2E183J | RD 18K | J 1/4W |
| R73 , 74 | | | RD14BB2C680J | RD 68 | J 1/6W |
| R75 | | | RD14BB2C332J | RD 3.3K | J 1/6W |
| R76 | | | RD14BB2C103J | RD 10K | J 1/6W |
| R77 | | | RD14BB2E331J | RD 330 | J 1/4W |
| R78 | | | RD14BB2E100J | RD 10 | J 1/4W |
| R79 | | | RD14BB2E331J | RD 330 | J 1/4W |

K: North America E: Europe M: Other Areas
W: Without Europe

⚠ indicates safety critical components.

PARTS LIST

*New Parts

Parts without Part No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

| Ref.No. | A d d | N e w | Parts No. | Description | Dest inati on |
|-----------|-------------|-------------|--------------|-------------------------------|---------------------|
| R95, 96 | | | RD14BB2C202J | RD 2.0K J 1/6W | |
| R98, 99 | | | RD14BB2C121J | RD 120 J 1/6W | |
| R101, 102 | | | RD14BB2C821J | RD 820 J 1/6W | |
| R103, 104 | | | RD14BB2C912J | RD 9.1K J 1/6W | |
| R105-108 | | | RD14BB2C472J | RD 4.7K J 1/6W | |
| R109-113 | | | RD14BB2C222J | RD 2.2K J 1/6W | |
| R117, 118 | | | RD14BB2C560J | RD 56 J 1/6W | |
| R119-122 | | | RD14BB2C222J | RD 2.2K J 1/6W | |
| R123-126 | | | RD14BB2C273J | RD 27K J 1/6W | |
| R127, 128 | | | RD14BB2C123J | RD 12K J 1/6W | |
| R130 | | | RD14BB2C102J | RD 1.0K J 1/6W | |
| R131-136 | | | RD14BB2C103J | RD 10K J 1/6W | |
| R137, 138 | | | RD14BB2C302J | RD 3.0K J 1/6W | |
| R139, 140 | | | RD14BB2C103J | RD 10K J 1/6W | |
| R141, 142 | | | RD14BB2C222J | RD 2.2K J 1/6W | |
| R143, 144 | | | RD14BB2C163J | RD 16K J 1/6W | |
| R145-148 | | | RD14BB2C222J | RD 2.2K J 1/6W | |
| R151, 152 | | | RD14BB2C473J | RD 47K J 1/6W | |
| R153 | | | RD14BB2C222J | RD 2.2K J 1/6W | |
| R155, 156 | | | RD14BB2C472J | RD 4.7K J 1/6W | |
| R157, 158 | | | RD14BB2C332J | RD 3.3K J 1/6W | |
| R159, 160 | | | RD14BB2C183J | RD 18K J 1/6W | |
| R161, 162 | | | RD14BB2C101J | RD 100 J 1/6W | |
| R163, 164 | | | RD14BB2C821J | RD 820 J 1/6W | |
| R165, 166 | | | RD14BB2C752J | RD 7.5K J 1/6W | |
| R167, 168 | | | RD14BB2C821J | RD 820 J 1/6W | |
| R169, 170 | | | RD14BB2C112J | RD 1.1K J 1/6W | |
| R171, 172 | | | RD14BB2E183J | RD 18K J 1/4W | |
| R173, 174 | | | RD14BB2C680J | RD 68 J 1/6W | |
| R177 | | | RD14BB2E331J | RD 330 J 1/4W | |
| R178 | | | RD14BB2E100J | RD 10 J 1/4W | |
| R179 | | | RD14BB2E331J | RD 330 J 1/4W | |
| R201-204 | | | RD14BB2H151J | SMALL-RD 150 J 1/2W | |
| VR1, 2 | 2A | | R31-0207-05 | VARIABLE RESISTOR (IN. SENS.) | |
| VR3, 4 | 2A | | R31-0208-05 | VARIABLE RESISTOR (FREQUENCY) | |
| S1, 2 | 2A | | S31-2630-05 | SLIDE SWITCH (FILTER, OPE.) | |
| S3 | 2A | | S62-0842-05 | SLIDE SWITCH (INPUT SELECTOR) | |
| S11, 12 | 2A | | S31-2630-05 | SLIDE SWITCH (FILTER, OPE.) | |
| D1 -8 | | | 1SS176 | DIODE | |
| D9 -12 | | | RD8.2JS(B) | ZENER DIODE | |
| D13 | | | 1SS176 | DIODE | |
| D14 | | | RD16JS(B) | ZENER DIODE | |
| D15, 16 | | | 1SS176 | DIODE | |
| D101-108 | | | 1SS176 | DIODE | |
| D113 | | | 1SS176 | DIODE | |
| D114 | | | RD16JS(B) | ZENER DIODE | |
| D115, 116 | | | 1SS176 | DIODE | |
| IC1 | | | UPC4574C | IC(OP AMP X4) | |
| IC3 | | | UPC4574C | IC(OP AMP X4) | |
| IC5 | | | UPC4574C | IC(OP AMP X4) | |
| IC6 | | | NJM4565D | IC(OP AMP X2) | |
| IC11 | | | UPC4574C | IC(OP AMP X4) | |
| IC15 | | | UPC4574C | IC(OP AMP X4) | |

| Ref.No. | A d d | N e w | Parts No. | Description | Dest inati on |
|--------------------------|-------------|-------------|-----------------|-------------------------------|---------------------|
| Q1, 2 | | | 2SC945(A)(Q, P) | TRANSISTOR | |
| Q3 -6 | | | 2SA733(A)(Q, P) | TRANSISTOR | |
| Q7 -10 | | | 2SC1845(F, E) | TRANSISTOR | |
| Q101, 102 | | | 2SC945(A)(Q, P) | TRANSISTOR | |
| Q103-106 | | | 2SA733(A)(Q, P) | TRANSISTOR | |
| Q107-110 | | | 2SC1845(F, E) | TRANSISTOR | |
| AUDIO UNIT (X09-5150-10) | | | | | |
| D25 | | | B30-1460-05 | LED (Red) | |
| C1 -4 | | | CK45FB1H101K | CERAMIC 100PF K | |
| C7 | | | C90-2688-05 | ELECTRO 2200UF 16WV | |
| C8 -10 | | | CE04DW1V101M | ELECTRO 100UF 35WV | |
| C11 | | | CE04DW1C100M | ELECTRO 10UF 16WV | |
| C13, 14 | | | CE04DW1V220M | ELECTRO 22UF 35WV | |
| C15, 16 | | | CF92FV1H102J | MF-C 1000PF J | |
| C21, 22 | | | CE04DW1H4R7M | ELECTRO 4.7UF 50WV | |
| C23, 24 | | | CF92FV1H473J | MF-C 0.047UF J | |
| C27 | | | CE04DW1C100M | ELECTRO 10UF 16WV | |
| C51, 52 | | | C90-1616-05 | ELECTRO 3300UF 35WV | |
| C55 | | | CF92FV1H222J | MF-C 2200PF J | |
| C57 | | | C90-2688-05 | ELECTRO 2200UF 16WV | |
| C58 | | | CE04DW1H010M | ELECTRO 1.0UF 50WV | |
| C61 | | | CE04DW1V470M | ELECTRO 47UF 35WV | |
| C64 | | | CF92FV1H102J | MF-C 1000PF J | |
| C65 | | | CE04DW1C100M | ELECTRO 10UF 16WV | |
| C66 | | | CE04DW1H010M | ELECTRO 1.0UF 50WV | |
| C101-104 | | | CK45FB1H101K | CERAMIC 100PF K | |
| C113, 114 | | | CE04DW1V220M | ELECTRO 22UF 35WV | |
| C115, 116 | | | CF92FV1H102J | MF-C 1000PF J | |
| C121, 122 | | | CE04DW1H4R7M | ELECTRO 4.7UF 50WV | |
| C123, 124 | | | CF92FV1H473J | MF-C 0.047UF J | |
| J1 | 2A | | E70-0820-05 | SCREW TERMINAL (POWER IN)(CC) | |
| J2 | 2A | | J13-0601-05 | FUSE HOLDER (FUSE) (C. C.) | |
| J3 | 2A | | J13-0603-05 | FUSE HOLDER (FUSE) | |
| J4 | 2B | | E70-0819-05 | SCREW TERMINAL (SP. OUTPUT) | |
| J5 | 2A | | E70-0818-05 | SCREW TERMINAL (P. CON) | |
| TP1, 2 | | | E40-3640-05 | PIN ASSY | |
| WH1, 2 | * | | E31-8103-05 | LEAD WIRE | |
| L1 | | | L33-1015-05 | CHOKE COIL | |
| T1 | * | | L19-0551-05 | DC/DC CONVERTER | |
| H | 2B | | N80-3010-45 | PAN HEAD SCREW (Black) | |
| J | 2B | | N80-2608-45 | PAN HEAD SCREW (Black) | |
| R1, 2 | | | RD14BB2C473J | RD 47K J 1/6W | |
| R3 | | | RD14BB2C562J | RD 5.6K J 1/6W | |
| R4 | | | RD14BB2C333J | RD 33K J 1/6W | |
| R5 | | | RD140B2H182J | SMALL-RD 1.8K J 1/2W | |
| R6 | | | RD14BB2C303J | RD 30K J 1/6W | |
| R7 | | | RD14BB2C562J | RD 5.6K J 1/6W | |
| R8, 9 | | | RD14BB2C472J | RD 4.7K J 1/6W | |
| R25 -28 | | | RD14BB2C272J | RD 2.7K J 1/6W | |
| R29, 30 | | | RD14BB2C562J | RD 5.6K J 1/6W | |
| R31, 32 | | | RD14BB2C272J | RD 2.7K J 1/6W | |
| R33 -36 | | | RD14BB2C101J | RD 100 J 1/6W | |

K: North America E: Europe M: Other Areas
W: Without Europe

⚠ indicates safety critical components.

PARTS LIST

*New Parts

Parts without Part No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

(X09-5150-10)

| Ref.No. | A d d w | N e w | Psrts No. | Description | Dest inati on |
|-----------|------------------|-------------|--------------|----------------------|---------------------|
| R37 ,38 | | | RD14DB2H101J | SMALL-RD 100 J 1/2W | |
| R41 -44 | | | R92-2115-05 | METAL FILMR 0.1 J 2W | |
| R45 ,46 | | | RD14BB2C432J | RD 4.3K J 1/6W | |
| R47 ,48 | | | RD14BB2C271J | RD 270 J 1/6W | |
| R49 ,50 | | | RD14BB2C103J | RD 10K J 1/6W | |
| R51 ,52 | | | RD14DB2H100J | SMALL-RD 10 J 1/2W | |
| R61 ,62 | | | RD14BB2C152J | RD 1.5K J 1/6W | |
| R65 ,66 | | | RD14BB2C680J | RD 68 J 1/6W | |
| R67 ,68 | | | RD14BB2C472J | RD 4.7K J 1/6W | |
| R71 | | | RD14DB2H100J | SMALL-RD 10 J 1/2W | |
| R72 ,73 | | | RD14BB2C332J | RD 3.3K J 1/6W | |
| R74 ,75 | | | RD14BB2C122J | RD 1.2K J 1/6W | |
| R77 | | | RD14BB2C682J | RD 6.8K J 1/6W | |
| R78 | | | RD14BB2C154J | RD 150K J 1/6W | |
| R80 | | | RD14BB2C101J | RD 100 J 1/6W | |
| R83 | | | RD14BB2C223J | RD 22K J 1/6W | |
| R84 | | | RD14BB2C163J | RD 16K J 1/6W | |
| R86 | | | RD14BB2C472J | RD 4.7K J 1/6W | |
| R87 | | | RD14BB2C681J | RD 680 J 1/6W | |
| R88 | | | RD14BB2C103J | RD 10K J 1/6W | |
| R89 | | | RD14BB2C272J | RD 2.7K J 1/6W | |
| R90 | | | RD14BB2C242J | RD 2.4K J 1/6W | |
| R91 | | | RD14BB2C273J | RD 27K J 1/6W | |
| R92 | | | RD14BB2C684J | RD 680K J 1/6W | |
| R93 | | | RD14BB2C273J | RD 27K J 1/6W | |
| R94 | | | RD14BB2C103J | RD 10K J 1/6W | |
| R95 ,96 | | | RD14BB2E152J | RD 1.5K J 1/4W | |
| R101, 102 | | | RD14BB2C473J | RD 47K J 1/6W | |
| R125-128 | | | RD14BB2C272J | RD 2.7K J 1/6W | |
| R129, 130 | | | RD14BB2C562J | RD 5.6K J 1/6W | |
| R131, 132 | | | RD14BB2C272J | RD 2.7K J 1/6W | |
| R133-136 | | | RD14BB2C101J | RD 100 J 1/6W | |
| R137, 138 | | | RD14DB2H101J | SMALL-RD 100 J 1/2W | |
| R141-144 | | | R92-2115-05 | METAL FILMR 0.1 J 2W | |
| R145, 146 | | | RD14BB2C432J | RD 4.3K J 1/6W | |
| R147, 148 | | | RD14BB2C271J | RD 270 J 1/6W | |
| R149, 150 | | | RD14BB2C103J | RD 10K J 1/6W | |
| R151, 152 | | | RD14DB2H100J | SMALL-RD 10 J 1/2W | |
| R201-236 | | | RD14BB2E221J | RD 220 J 1/4W | |
| VR1 ,2 | | | R12-1618-05 | TRIMMING POT. (3.3K) | |
| VR11, 12 | | | R12-1618-05 | TRIMMING POT. (3.3K) | |
| D1 -4 | | | 1SS176 | DIODE | |
| D6 ,7 | | | 1SS176 | DIODE | |
| D8 | | | RD10JS(B) | ZENER DIODE | |
| D9 ,10 | | | 1SS176 | DIODE | |
| D11 | | | D10LC20U#A | DIODE | |
| D12 | | | D10LC20UR#A | DIODE | |
| D15 | | | RM4ZLF-J1 | DIODE | |
| D16 | | | RD7.5JS(B) | ZENER DIODE | |
| D17 | | | 1SS176 | DIODE | |
| D18 | | | RD20JS(B) | ZENER DIODE | |
| D19 | | | RD5.1JS(B) | ZENER DIODE | |
| D23 ,24 | | | 1SS176 | DIODE | |
| D51 ,52 | | | 1SS176 | DIODE | |

| Ref.No. | A d d w | N e w | Psrts No. | Description | Dest inati on |
|-----------|------------------|-------------|----------------|-------------------------|---------------------|
| D101-104 | | | 1SS176 | DIODE | |
| D151, 152 | | | 1SS176 | DIODE | |
| IC1 | | | UPC494C | IC(SWITCHING REGULATOR) | |
| Q1 ,2 | | | 2SC945(A)(Q,P) | TRANSISTOR | |
| Q3 | | | 2SA733(A)(Q,P) | TRANSISTOR | |
| Q4 | | | 2SC945(A)(Q,P) | TRANSISTOR | |
| Q7 | | | 2SC1845(F,E) | TRANSISTOR | |
| Q11 ,12 | | | 2SC2590(Q,R) | TRANSISTOR | |
| Q13 ,14 | | | 2SC1627A | TRANSISTOR | |
| Q15 ,16 | | | 2SA817A | TRANSISTOR | |
| Q17 ,18 | | | 2SC5100LB | TRANSISTOR | |
| Q19 ,20 | | | 2SA1908LB | TRANSISTOR | |
| Q21 -24 | | | 2SC945(A)(Q,P) | TRANSISTOR | |
| Q25 ,26 | | | 2SA733(A)(Q,P) | TRANSISTOR | |
| Q27 -30 | | | MTAJ30N06ELFK | FET | |
| Q31 | | | 2SC945(A)(Q,P) | TRANSISTOR | |
| Q32 | | | 2SA733(A)(Q,P) | TRANSISTOR | |
| Q33 | | | 2SC945(A)(Q,P) | TRANSISTOR | |
| Q35 ,36 | | | 2SC3940A(R,S) | TRANSISTOR | |
| Q107 | | | 2SC1845(F,E) | TRANSISTOR | |
| Q111, 112 | | | 2SC2590(Q,R) | TRANSISTOR | |
| Q113, 114 | | | 2SC1627A | TRANSISTOR | |
| Q115, 116 | | | 2SA817A | TRANSISTOR | |
| Q117, 118 | | | 2SC5100LB | TRANSISTOR | |
| Q119, 120 | | | 2SA1908LB | TRANSISTOR | |
| Q121, 122 | | | 2SC945(A)(Q,P) | TRANSISTOR | |
| TH1 | | | ERT-D2ZHL103S | THERMISTOR | |

K: North America E: Europe M: Other Areas
W: Without Europe

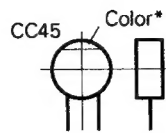
⚠ indicates safety critical components.

PARTS DESCRIPTIONS

CAPACITORS

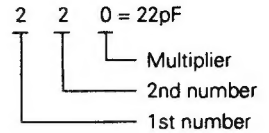
CC 45 TH 1H 220 J
1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc. 4 = Voltage rating
2 = Shape ... round, square, ect. 5 = Value
3 = Temp. coefficient 6 = Tolerance



• Capacitor value

010 = 1pF
100 = 10pF
101 = 100pF
102 = 1000pF = 0.001μF
103 = 0.01μF



• Temperature coefficient

| 1st Word | C | L | P | R | S | T | U |
|----------|-------|-----|--------|--------|-------|------|--------|
| Color* | Black | Red | Orange | Yellow | Green | Blue | Violet |
| ppm/°C | 0 | -80 | -150 | -220 | -330 | -470 | -750 |

| 2nd Word | G | H | J | K | L |
|----------|-----|-----|------|------|------|
| ppm/°C | ±30 | ±60 | ±120 | ±250 | ±500 |

Example : CC45TH = -470 ± 60ppm/°C

• Tolerance (More than 10pF)

| Code | C | D | G | J | K | M | X | Z | P | No code |
|------|-------|------|----|----|-----|-----|------------|------------|------------|---------------------------------------------------------|
| (%) | ±0.25 | ±0.5 | ±2 | ±5 | ±10 | ±20 | +40 -20 | +80 -20 | +100 -0 | More than 10μF - 10 ~ +50 Less than 4.7μF - 10 ~ +75 |

(Less than 10pF)

| Code | B | C | D | F | G |
|------|------|-------|------|----|----|
| (pF) | ±0.1 | ±0.25 | ±0.5 | ±1 | ±2 |

• Voltage rating

| 2nd word | A | B | C | D | E | F | G | H | J | K | V |
|----------|------|------|------|------|------|------|------|------|------|------|----|
| 1st word | | | | | | | | | | | |
| 0 | 1.0 | 1.25 | 1.6 | 2.0 | 2.5 | 3.15 | 4.0 | 5.0 | 6.3 | 8.0 | - |
| 1 | 10 | 12.5 | 16 | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 35 |
| 2 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | - |
| 3 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | - |

• Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J
1 2 3 4 5 6 7
(Chip) (CH, RH, UJ, SL)

(EX) C K 7 3 F F 1 H 0 0 0 Z
1 2 3 4 5 6 7
(Chip) (B, F)

Refer to the table above.

1 = Type
2 = Shape
3 = Dimension
4 = Temp. coefficient
5 = Voltage rating
6 = Value
7 = Tolerance

Dimension (Chip capacitors)

| Dimension code | L | W | T |
|----------------|-----------|------------|----------------|
| Empty | 5.6 ± 0.5 | 5.0 ± 0.5 | Less than 2.0 |
| A | 4.5 ± 0.5 | 3.2 ± 0.4 | Less than 2.0 |
| B | 4.5 ± 0.5 | 2.0 ± 0.3 | Less than 2.0 |
| C | 4.5 ± 0.5 | 1.25 ± 0.2 | Less than 1.25 |
| D | 3.2 ± 0.4 | 2.5 ± 0.3 | Less than 1.5 |
| E | 3.2 ± 0.2 | 1.6 ± 0.2 | Less than 1.25 |
| F | 2.0 ± 0.3 | 1.25 ± 0.2 | Less than 1.25 |
| G | 1.6 ± 0.2 | 0.8 ± 0.2 | Less than 1.0 |

RESISTORS

• Chip resistor (Carbon)

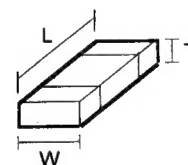
(EX) R K 7 3 E B 2 B 0 0 0 J
1 2 3 4 5 6 7
(Chip) (B, F)

• Carbon resistor (Normal type)

(EX) R D 1 4 B B 2 C 0 0 0 J
1 2 3 4 5 6 7

- 1 = Type 5 = Rating wattage
2 = Shape 6 = Value
3 = Dimension 7 = Tolerance
4 = Temp. coefficient

Dimension



Dimension (Chip resistor)

| Dimension code | L | W | T |
|----------------|-----------|------------|-----------|
| E | 3.2 ± 0.2 | 1.6 ± 0.2 | 1.0 |
| F | 2.0 ± 0.3 | 1.25 ± 0.2 | 1.0 |
| G | 1.6 ± 0.2 | 0.8 ± 0.2 | 0.5 ± 0.1 |

Rating wattage

| Code | Wattage | Code | Wattage | Code | Wattage |
|------|---------|------|---------|------|---------|
| 1J | 1/16W | 2C | 1/6W | 3A | 1W |
| 2A | 1/10W | 2E | 1/4W | 3D | 2W |
| 2B | 1/8W | 2H | 1/2W | | |

SPECIFICATIONS

Specifications subject to change without notice.

Audio Section

Max power output (4 Ω)

| | |
|----------------------|----------------------|
| 4 Channel mode..... | 100 W x 4 |
| 3 Channel mode | 100 W x 2 +300 W x 1 |
| 2 Channel mode..... | 300 W x 2 |

Rated power output (4 Ω)

| | |
|-------------------------------------------------------------|---------------------|
| 4 Channel mode (20 Hz ~20 kHz, less than 0.08% THD)..... | 50 W x 4 |
| 3 Channel mode (1 kHz, 0.08% THD) + (1 kHz, 0.8% THD) | 50 W x 2 +150 W x 1 |
| 2 Channel mode (1 kHz, 0.8% THD) | 150 W x 2 |

Rated power output (2 Ω)

| | |
|----------------------------------------|----------|
| 4 Channel mode (1 kHz, 0.8% THD) | 75 W x 4 |
|----------------------------------------|----------|

Frequency Response (+0, -1 dB)5 Hz ~ 50 kHz

Signal to Noise Ratio100 dB

Sensitivity (MAX) (rated output)0.15 V

Sensitivity (MIN) (rated output)4.0 V

Input Impedance10 k Ω

Low pass filter (12 dB/oct.) (Variable).....50 ~ 200 Hz

High pass filter (12 dB/oct.) (Variable).....50 ~ 200 Hz

General

Operating voltage (11 ~ 16V allowable).....14.4 V

Current consumption (1 kHz, 10% THD)38 A

Dimensions(W x H x D)290 x 52 x 280 mm
(11-7/16 x 2-1/16 x 11 in.)

Weight.....3.6 kg (7.9 lb)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on North America (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

KENWOOD CORPORATION

14-6,Dogenzaka 1-chome, Shibuya-ku, Tokyo, 150 Japan

KENWOOD SERVICE CORPORATION

P.O BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745, U.S.A.

KENWOOD ELECTRONICS CANADA INC.

6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD ELECTRONICS LATIN AMERICA S.A.

P.O BOX 55-2791, Piso 6 plaza Chase, Cl. 47 y Aquilino de la Guardia Panama, Republic de Panama

KENWOOD ELECTRONICS U.K. LIMITED

KENWOOD House, Dwight Road, Watford, Herts., WD1 8EB., United Kingdom

KENWOOD ELECTRONICS BENELUX N.V.

Meachelsesteenweg 418, B-1930 Zaventem, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH

Piembrücker Str. 15, 63150 Heusenstamm, Germany

KENWOOD ELECTRONICS FRANCE S.A.

13 Boulevard Ney, 75018 Paris, France

KENWOOD ELECTRONICS ITALIA S.p.A.

Via G. Sirtori, 7/9 20129, Milano, Italy

KENWOOD IBÉRICA S.A.

Bolivia, 239-08020 Barcelona, Spain

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. (A.C.N. 001499 074)

P.O Box 504, 8 Figtree Drive, Australia Centre, Homebush, N.S.W. 2140, Australia

KENWOOD & LEE ELECTRONICS, LTD.

Unit 3712-3724, Level 37, Tower 1, Metroplaza, 223 Hing Fong Road, Kwai Fong N.T., Hong Kong

KENWOOD ELECTRONICS SINGAPORE PTE LTD.

No. 1 Genting Lane #02-02, KENWOOD Building, Singapore, 349544

KENWOOD ELECTRONICS (MALAYSIA) SDN BHD.

#4.01 Level 4, Wisma Academy Lot 4A, Jalan 19/1 46300 Petaling Jaya Selangor Darul Ehsan Malaysia